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**ABSTRACT**

A DNA based number system and basic arithmetic operations i.e. addition and subtraction for this have been developed. The method of invention comprises assignment of arbitrary integer values to all DNA bases (A=0, T=1, C=2, G=3), arbitrary assignment of complements of DNA bases (A = G, complement of T=C and vice-versa), representation of integers and real numbers in terms of DNA bases and performing basic arithmetic assignment on DNA based number system. This will find wide application in the area of DNA or other molecular computation devices and processors.